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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/733,009	12/08/2000	Frank Ficker	S&S-99/1074a	3026
22827	7590	09/27/2004	EXAMINER	
DORITY & MANNING, P.A. POST OFFICE BOX 1449 GREENVILLE, SC 29602-1449			VANATTA, AMY B	
			ART UNIT	PAPER NUMBER
			3765	

DATE MAILED: 09/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/733,009

Applicant(s)

FICKER, FRANK

Examiner

Amy B. Vanatta

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 28-46 is/are pending in the application.
- 4a) Of the above claim(s) 44-46 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 28-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Species 2 in the reply filed on 6/30/04 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). Applicant asserts that all of claims 38-43 are either generic or drawn to the elected species. Thus, claims 44-46 remain withdrawn from consideration.

Specification

2. The substitute specification filed 2/29/04 has been entered.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 41 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 41 recites that the fibers are processed in a spinning apparatus before the step of drafting. Drafting, however, is conventionally defined as "The process of drawing out

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laps, slivers, slubbings, and rovings to decrease the linear density (see drawing (staple yarn))." (See definition provided in "Textile Terms and Definitions", cited as Reference "U", attached). Drawing (staple yarn) is defined as "Operations by which slivers are blended, doubled, or leveled, and by drafting reduced to a sliver or a roving suitable for spinning." Thus, it appears that a fiber is typically drafted *before* spinning. It is unclear how the drafting in the disclosed invention is performed on a spun yarn. The description of the invention in the specification and in Applicant's remarks indicate that the drafting is performed on a fiber band or other loose strand such that the fibers can be moved relative to each other. The specification fails to adequately disclose how this drafting is performed on a spun yarn, which has a significantly different structure than a fiber band, loose fibers, or fiber flock.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 28-38 and 43 are rejected under 35 U.S.C. 102(b) as being anticipated by Marshall (US 3,727,270).

Marshall discloses a process of drafting fibers including providing fibers to be drafted, providing at least one fluid (air stream from air connection 14), guiding the fluid to the fibers to be drafted (see Fig. 2), and entraining the fibers with the fluid so that the

fluid exerts at least a portion of the tensile force necessary to cause drafting of the individual fibers relative to other fibers in the drafting direction as claimed (col. 2, lines 49-60). Regarding claim 30, the entraining by the fluid in the method of Marshall causes inter-fiber cohesive forces to be less than the total entraining forces, thus resulting in drafting.

Marshall discloses that certain sections of the fibers are moved faster than other sections of the fibers as in claim 29; see col. 3, lines 5-6, disclosing that fibers at C are accelerated faster than preceding fibers. The fibers at the faster moving section (at C) are entrained by fluid within the guide tube 16, thus meeting the limitations of claim 29. With regard to claim 31, the fibers are further accelerated at D, and thus fibers which precede "D" are slower. That is, the fibers at "C" are slower relative to the acceleration of the fibers at D, and are entrained with fluid at this slower moving section as in claim 31.

The same fluid (from air nozzle 14) is used for restraining the slower moving fibers and for acceleration of the faster fibers as in claim 33. The fluid is air (col. 1, line 54-59) as in claim 34.

Regarding claim 32, the fibers are decelerated within plenum chamber 30 (Fig. 4). The plenum chamber has partitions 36, 38 which act as baffles to deflect the air stream for deceleration (col. 5, lines 20-21). This deflection of the air stream would inherently result in some of the air being forced backwards, in order to cause deceleration of the air. This would form entraining force components opposite to the

drafting direction, as in claim 32, in order to decelerate the fibers as disclosed by Marshall.

Regarding claim 35, certain sections of the fibers are restrained by rolls 17 (see Fig. 2), which sections are slower moving than the fiber sections which are in the acceleration zones B, C, and D. The rolls are provide mechanical forces as in claim 35.

The drafting preformed by Marshall assorts and aligns and partially separates the fibers, thus performing a carding function as in claim 36.

The fibers which are processed in the method of Marshall are initially in the form of loose fibers or a fiber band as in claim 37; see Fig. 2 and col. 2, line 49-60.

The tube 10 (Figs. 1-2) forms a draft chamber as in claim 38 and the air is introduced via connection 14, which forms an injector to the extent claimed. The connector 14 in conjunction with the convergent section 21 and nozzle section 23 regulates the fluid flow, as in claim 43.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Marshall (US 3,727,270) in view of Reese et al (US 6,168,743).

Marshall discloses a process as claimed, however a step of circulating the fluid in a recycle circuit is not disclosed. It is conventional to recycle fluid in textile process in order to conserve resources. Reese et al disclose a textile treating process in which the steam in nozzle 56 is exhausted through ports 54 and 55 and may then be collected and recycled (col. 2, line 58 and col. 4, lines 59-60). It would have been obvious to one having ordinary skill in the art at the time the invention was made to circulate the fluid from the drafting chamber of Marshall in a recycle circuit to recycle the fluid, such as taught by Reese et al, in order to conserve resources.

9. Claims 40 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marshall (US 3,727,270) in view of Das et al (US 4,338,233).

Marshall discloses a process as claimed, however a step of treating the fibers with an additive for lessening cohesion is not disclosed. It is conventional to provide fibers with a size composition which includes a lubricant to improve handling of the fibers. Das et al disclose a size which has includes a lubricant (col. 1, lines 28; col. 10, line 42). It would have been obvious to one having ordinary skill in the art at the time the invention was made to treat the fibers in the process of Marshall with a size composition which includes a lubricant, such as taught by Das, in order to facilitate the handling of the fibers.

Marshall also does not disclose a step of drying the fibers, as in claim 42. Fibers are conventionally dried during and/or after processing procedures. Das et al disclose the fibers are conventionally dried after processing, especially in the case of fibers with

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size. It would have been obvious to one having ordinary skill in the art at the time the invention was made to dry the fibers in the process of Marshall, such as taught by Das, in order to dry a size applied thereto or to dry the fibers after exposure to humidity or other fluids during processing.

Response to Arguments


10. Applicant's arguments with respect to claims 28-43 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy B. Vanatta whose telephone number is 703-308-2939. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Calvert can be reached on 703-305-1025. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Amy B. Vanatta
Primary Examiner
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